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TWO NEW GENERA OF OLYREAE FROM SOUTH AMERICA

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Two closely related genera of the Olyreae have been known from South America. Diandrolyra Stapf was described in 1906, and Reitzia Swallen in 1956, the latter from Santa Catarina, Brazil. Two more are now to be added. Bulbulus Swallen was found by the writer at Santarém, Pará, and in the state of Maranhão, Brazil, in 1934. The type species of Piresia Swallen was first collected by André Goeldi along the Bragança Railroad, Pará, Brazil, in 1914, and more recently by Pires, Froes, and Silva, near Breves, Pará, Brazil, and in Surinam by Thomas Soderstrom. The other species of Piresia is based on Olyra sympodica Doell, described from French Guiana in 1877. This is the most widespread species of these four genera, ranging from Trinidad to Surinam, and Pernambuco, Brazil.

All the species are rare in forested regions, judging from the small number of specimens which have been collected. They may have been overlooked, however, because the inflorescences are usually hidden under the foliage and are not apparent.

Key to the Genera

Glumes of fertile spikelet 3-nerved.

Nerves of glumes of fertile spikelet prominent; fruit pubescent; culms biform.....1. Piresia

Nerves of glumes of fertile spikelet faint; fruit glabrous; culms all alike.....2. Reitzia

Glumes of fertile spikelet 5-7-nerved.

Stamens 2; fruit glabrous.....3. Diandrolyra

Stamens 3; fruit pubescent. Culms bulbous at base.

4. Bulbulus

1. PIRESIA Swallen, gen. nov.

Monoeca; culmi biformes, culmis fertilibus brevibus elaminatis, et culmis foliosis multo longioribus foliis in parte superiore congestis; spiculae masculae et femineae in eadem inflorescentia dispositae; fructus ellipticus, sessilis, pilis albidis villosus.

Culms of two kinds, the fertile ones short, bladeless, or with very much reduced blades, mostly hidden underneath the foliage, the leafy ones 7-25 cm. tall, much exceeding the fertile culms, the leaves congested in the upper part; staminate spikelets about 3 mm. long, subsessile, 1 (sometimes 2) below each pistillate spikelet; pistillate spikelets 1 or 2, terminating the main culm and branches; fruit elliptic, sessile, about 6 mm. long, the lemma and palea white-villous.

Type species: Piresia goeldii Swallen.

Key to the Species

- Blades lanceolate, 4-5 cm. long, not more than 7 on each culm, crowded.....1. P. sympodica
 Blades ovate-lanceolate, mostly less than 2.5 cm. long, as many as 20 on each culm, evenly spaced...2. P. goeldii

1. PIRESIA SYMPODICA (Doell) Swallen, comb. nov.

Olyra sympodica Doell in Mart. Fl. Bras. 2: 322. 1877.

Raddia biformis Hitchc. & Chase, Contr. U. S. Nat. Herb. 18: 358. 1917.

Raddia sympodica Hitchc. U. S. Dept. Agr. Misc. Publ. 243: 372. 1936.

Material examined: Trinidad: Caparo, Broadway 2375 (type of Raddia biformis Hitchc. & Chase), 8122; Tabaquite, Hitchcock 10127; Ortoire River, Guaya-quayari Road, Britton, Freeman, & Nowell 2530. British Guiana: Barima River, Archer 2524. Surinam: Soderstrom 53980. French Guiana: Karouany, Sagot 925 (type of Olyra sympodica Doell). Brazil: Pernambuco: Tpojuca, Pickel 3281.

2. PIRESIA GOELDII Swallen, sp. nov.

Culmi foliosi erecti, 7-14 (25) cm. alti, retrorse pubescentes, nodis dense barbatis, laminis 2-18 in parte superiore congestis, 1.7 cm. longis, 2.5-6 mm. latis; culmi fertiles 5 cm. alti, geniculati, spiculis femineis 2, appressis, 6 mm. longis, glumis 3-nervibus; fructus plus minusve obovatus, lemmate et palea pilis albidis villosis.

Perennial; leafy culms in small tufts, 7-14 cm. tall, erect or spreading toward the top, densely retrorsely pubescent in lines, the nodes spreading-pubescent, with 2-18 distichous crowded blades in the upper 1/3 or 1/4; lower sheaths much shorter than the internodes, glabrous, bladeless, the upper ones closely overlapping, pilose on the margins, the back pilose to glabrous; blades as much as 1.7 cm. long, 2.5-6 mm. wide, firm, ovate, sparsely papillose-hispid; fertile culms about 5 cm. tall, bladeless, with 2 appressed pistillate spikelets and 1 or 2 staminate spikelets beneath each pistillate one; staminate spikelets 3 mm. long, with 3 stamens; pistillate spikelet about 6 mm. long, firm, acute, glabrous, the glumes 3-nerved, the fruit slightly obovate, the lemma and palea villous.

Type in the U. S. National Herbarium, No. 1039650, collected in sandy humous places below second growth forest, Maguary-assú, Bragança Railroad, Pará, Brazil, June 1914, by André Goeldi (No. 72).

Additional material examined: Brazil: Pará: Breves, Pires, Froes & Silva 4908. Surinam: Soderstrom 54291.

2. REITZIA SMITHII Swallen, Sellowia 7: 8. 1956.

Material examined: Brazil: Santa Catarina: Azambuja, Smith & Reitz 6123 (type); Smith, Reitz & Klein 12255; Reitz 5939. São Paulo: Morro das Pedras, Brade 8107 (I.A.N.).

3. *DIANDROLYRA BICOLOR* Stapf, Kew Bull. Misc. Inf. 1906: 204. 1906.

"Native country unknown. Raised at Kew from seeds communicated by Messrs. Sander and Son." Known only from type material. It is undoubtedly tropical American since other genera, closely related to it, have been found there.

4. *BULBULUS* Swallen, gen. nov.

Culmi foliosi, inflorescentibus terminalibus; spiculae in paribus 2-5 dispositae, masculae longipedicellatae, femineae brevipedicellate; spiculae femineae acutae vel acuminatae, glumis 7-nervatis et fructu villosus; stamina 3.

Inflorescence terminating leafy culms, consisting of 2-5 pairs of spikelets, one of each pair pistillate, short-pedicellate, the other staminate, long-pedicellate; pistillate spikelets 7-8 mm. long, the glumes acute or acuminate, 7-nerved, the fruit 5.5 mm. long, villous, the margins inrolled covering the palea; staminate spikelets 5 mm. long, glabrous, containing 3 stamens.

BULBULUS NERVATUS Swallen, sp. nov.

Culmi caespitosi, erecti vel adscendentes, retrorse scabri, nodis barbatis; vaginae glabrae vel retrorse scabrae; laminae 2-4.5 cm. longae, 7-16 mm. latae, glabrae, breviter petiolatae; spiculae femineae 7-8 mm. longae, nervatae, acutae vel acuminatae; fructus 5.5 mm. longus, pilosus vel villosus.

Perennial; culms slender, in small dense tufts, 12-19 cm. tall, erect or somewhat spreading, retrorsely scabrous in lines, the nodes densely and shortly barbate; lower sheaths shorter than the internodes, bladeless or nearly so, glabrous, the upper 2-5 crowded, retrorsely hispid in lines, with normally developed blades; blades 2-4.5 cm. long, 7-16 mm. wide, acute, truncate-rounded or slightly cordate at the base, glabrous, with a petiole about 1 mm. long; panicles small, just exserted or partly enclosed in the sheath, composed of 2-5 short-pedicellate pistillate spikelets and 1 (sometimes 2) long-pedicellate staminate spikelets below each of the pistillate spikelets; staminate spikelets about 5 mm. long, very slender, glabrous, containing 3 stamens; pistillate spikelets on a short thickened pedicel, the glumes 7-8 mm. long, the nerves prominent, acute or acuminate, somewhat twisted; fruit 5.5 mm. long, light-yellowish, pilose or villous, the margins of the lemma inrolled covering the palea.

Type in the U. S. National Herbarium, No. 1612746, collected in high sandy forest from Caxias to Barra do Corda, Maranhão, Brazil, February 18-26, 1934, by Jason R. Swallen (No. 3552).

Additional material examined: Brazil: Pará: Santarém, Swallen 3284; Castanhal, Estrada de Ferra de Bragança, Goeldi 303. Territory of Amapá: Rio Oiapoque, Froes 26759 (I.A.N.).